

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

1. (Currently Amended) A method of controlling traction in a vehicle having a ~~rotatably articulating~~ suspension capable of rotatably articulating in a plane defined by the pitch of the vehicle, comprising:

determining a performance characteristic of the vehicle;
determining a performance characteristic of at least one of a plurality of wheel assemblies of the rotatably articulating suspension;
comparing the performance characteristic of the vehicle and the performance characteristic of the at least one of the plurality of wheel assemblies; and
altering the performance of the vehicle based upon the comparison to affect the vehicle's traction.

2. (Original) A method, according to claim 1, wherein:

determining the performance characteristic of the vehicle comprises determining a velocity of the vehicle; and
determining the performance characteristic of the at least one of the plurality of wheel assemblies comprises determining a rotational velocity of the at least one of the plurality of wheel assemblies.

3. (Original) A method, according to claim 1, wherein:

determining the performance characteristic of the vehicle comprises a load on a first of a plurality of wheel assemblies; and
determining the performance characteristic of the at least one of the plurality of wheel assemblies comprises a load on another one or more of the plurality of wheel assemblies.

4. (Currently Amended) A method of controlling traction in a vehicle having a rotatably articulating suspension , comprising:

determining a load on each of a plurality of wheel assemblies of the articulated suspension; and

adjusting the suspension through rotation in a plane defined by the pitch of the vehicle such that each of the loads is within a predetermined range.

5. (Original) A method, according to claim 4, wherein determining the load comprises sensing a load on each suspension arm of the plurality of wheel assemblies.

6. (Original) A method, according to claim 4, wherein determining the load comprises sensing a pressure of each tire of the plurality of wheel assemblies.

7. (Original) A method, according to claim 4, wherein adjusting the articulated suspension comprises adjusting the articulated suspension to substantially equalize the loads.

8. (Original) A method, according to claim 4, wherein adjusting the articulated suspension comprises articulating at least one of the plurality of wheel assemblies with respect to a chassis of the vehicle.

9. (Original) A method, according to claim 4, further comprising determining a lightly loaded wheel assembly of the plurality of wheel assemblies, such that adjusting the articulated suspension comprises articulating the lightly loaded wheel assembly with respect to a chassis of the vehicle.

10. (Currently Amended) A method of controlling traction in a vehicle having a rotatably articulating suspension, comprising:

acquiring load data for a plurality of wheel assemblies of the articulated suspension;

identifying a lightly loaded wheel assembly of the plurality of wheel assemblies from the load data; and

rotatably articulating the lightly loaded wheel assembly with respect to a chassis of the vehicle in a plane defined by the pitch of the vehicle.

11. (Original) A method, according to claim 10, wherein acquiring the load data comprises sensing a load on each suspension arm of the plurality of wheel assemblies.

12. (Original) A method, according to claim 10, wherein acquiring the load data comprises sensing a pressure of each tire of the plurality of wheel assemblies.
13. (Original) A method, according to claim 10, wherein articulating the lightly loaded wheel assembly comprises articulating the lightly loaded wheel assembly to substantially equalize the load on each of the plurality of wheel assemblies.
14. (Currently Amended) A method of controlling traction in a vehicle having rotatably articulating suspension, comprising:
- determining whether forces on each of a plurality of wheel assemblies of the articulated suspension are substantially equal;
 - determining whether a rotational velocity of each wheel ~~tire~~ of the plurality of wheel assemblies corresponds to a velocity of the vehicle; and
 - rotatably articulating the ~~articulated~~ suspension in a plane defined by the pitch of the vehicle such that each of the forces is within a predetermined range if the forces are not substantially equal and at least one of the rotational velocities fails to correspond to the velocity of the vehicle.
15. (Original) A method, according to claim 14, wherein determining whether forces on each of a plurality of wheel assemblies of the articulated suspension are substantially equal comprises sensing a load on each suspension arm of the plurality of wheel assemblies.
16. (Original) A method, according to claim 14, wherein determining whether forces on each of a plurality of wheel assemblies of the articulated suspension are substantially equal comprises sensing a pressure of each tire of the plurality of wheel assemblies.
17. (Previously Presented) A method, according to claim 14, wherein rotatably articulating the articulated suspension comprises adjusting the articulated suspension to substantially equalize the forces.
18. (Previously Presented) A method, according to claim 14, wherein rotatably articulating the articulated suspension comprises articulating at least one of the plurality of wheel assemblies with respect to a chassis of the vehicle.

19. (Original) A method, according to claim 14, further comprising determining a lightly loaded wheel assembly of the plurality of wheel assemblies, such that adjusting the articulated suspension comprises articulating the lightly loaded wheel assembly with respect to a chassis of the vehicle.

20. (Original) A method, according to claim 14, further comprising reducing the rotational velocity of one of the tires if the forces are substantially equal and the one of the tires has a determined rotational velocity that is greater than that which corresponds to the velocity of the vehicle.

21. (Original) A method, according to claim 20, wherein reducing the rotational velocity comprises reducing the rotational velocity of the tire by braking.

22. (Original) A method, according to claim 20, wherein reducing the rotational velocity comprises reducing the rotational velocity of the tire by at least partially removing power to the tire.

23. (Original) A method, according to claim 20, wherein reducing the rotational velocity comprises reducing the rotational velocity of the tire by regenerative braking.

24 – 43. (Cancelled)

44. (Currently Amended) A vehicle, comprising:

a chassis;

a suspension rotatably articulating relative to the chassis in a plane defined by the pitch of the vehicle and including a plurality of wheel assemblies;

means for determining a performance characteristic of the vehicle;

means for determining a performance characteristic of at least one of the wheel assemblies;

means for comparing the performance characteristic of the vehicle and the performance characteristic of the at least one of the plurality of wheel assemblies; and

means for altering the performance of the vehicle based upon the comparison to affect the vehicle's traction.

45. (Previously Presented) A vehicle, according to claim 44, wherein:
the determining means for the performance characteristic of the vehicle comprises means
for determining a velocity of the vehicle; and
the determining means for the performance characteristic of the wheel assembly
comprises determining a rotational velocity of the at least one of the plurality of
wheel assemblies.
46. (Previously Presented) A vehicle, according to claim 44, wherein:
the determining means for the performance characteristic of the vehicle comprises means
for determining a load on a first of a plurality of wheel assemblies; and
the determining the performance characteristic of the wheel assembly comprises means
for determining a load on another one or more of the plurality of wheel
assemblies.
47. (Currently Amended) A vehicle, comprising:
a chassis;
a suspension rotatably articulating relative to the chassis in a plane defined by the pitch of
the vehicle and including a plurality of wheel assemblies;
means for determining a load on each of the wheel assemblies; and
adjusting the suspension through rotation such that each of the loads is within a
predetermined range.
48. (Previously Presented) A vehicle, according to claim 47, wherein the load determining
means comprises means for sensing a load on each suspension arm of the plurality of wheel
assemblies.
49. (Previously Presented) A vehicle, according to claim 47, wherein the load determining
means comprises means for sensing a pressure of each tire of the plurality of wheel assemblies.
50. (Previously Presented) A vehicle, according to claim 47, wherein the adjusting means
comprises means for adjusting the articulated suspension to substantially equalize the loads.

51. (Previously Presented) A vehicle, according to claim 47, wherein the adjusting means comprises means for articulating at least one of the plurality of wheel assemblies with respect to a chassis of the vehicle.

52. (Previously Presented) A vehicle, according to claim 47, further comprising means for determining a lightly loaded wheel assembly of the plurality of wheel assemblies, such that the adjusting means articulates the lightly loaded wheel assembly with respect to a chassis of the vehicle.

53. (Currently Amended) A vehicle, comprising:
a chassis;
a suspension rotatably articulating relative to the chassis in a plane defined by the pitch of the vehicle and including a plurality of wheel assemblies;
means for acquiring load data for the wheel assemblies;
means for identifying a lightly loaded wheel assembly of the plurality of wheel assemblies from the load data; and
means for rotatably articulating the lightly loaded wheel assembly with respect to the chassis.

54. (Previously Presented) A vehicle, according to claim 53, wherein each wheel assembly includes a suspension arm and the load data acquiring means comprises means for sensing a load on each suspension arm of the plurality of wheel assemblies.

55. (Previously Presented) A vehicle, according to claim 53, wherein the load data acquiring means comprises means for sensing a pressure of each tire of the plurality of wheel assemblies.

56. (Previously Presented) A vehicle, according to claim 53, wherein the articulating means comprises means for articulating the lightly loaded wheel assembly to substantially equalize the load on each of the plurality of wheel assemblies.

57. (Currently Amended) A vehicle, comprising:
a chassis;

a suspension rotatably articulating relative to the chassis in a plane defined by the pitch of the vehicle and including a plurality of wheel assemblies, each wheel assembly including a wheel;

means for determining whether forces on each of a plurality of wheel assemblies of the articulated suspension are substantially equal;

means for determining whether a rotational velocity of each wheel corresponds to a velocity of the vehicle; and

means for rotatably articulating the articulated suspension such that each of the forces is within a predetermined range if the forces are not substantially equal and at least one of the rotational velocities fails to correspond to the velocity of the vehicle.

58. (Previously Presented) A vehicle, according to claim 57, wherein the means for determining whether forces on each of a plurality of wheel assemblies of the articulated suspension are substantially equal comprises means for sensing a load on each suspension arm of the plurality of wheel assemblies.

59. (Previously Presented) A vehicle, according to claim 57, wherein the means determining whether forces on each of a plurality of wheel assemblies of the articulated suspension are substantially equal comprises means for sensing a pressure of each tire of the plurality of wheel assemblies.

60. (Previously Presented) A vehicle, according to claim 57, wherein the rotatably articulating means comprises adjusting the articulated suspension to substantially equalize the forces.

61. (Previously Presented) A vehicle, according to claim 57, wherein the rotatably articulating means comprises means for articulating at least one of the plurality of wheel assemblies with respect to a chassis of the vehicle.

62. (Previously Presented) A vehicle, according to claim 57, further comprising means for determining a lightly loaded wheel assembly of the plurality of wheel assemblies, such that adjusting the articulated suspension comprises articulating the lightly loaded wheel assembly with respect to a chassis of the vehicle.

63. (Previously Presented) A vehicle, according to claim 57, further comprising means for reducing the rotational velocity of one of the tires if the forces are substantially equal and the one of the tires has a determined rotational velocity that is greater than that which corresponds to the velocity of the vehicle.